Ontario
Ministry of
Skills
Development

Motor Vehicle Mechanics in Ontario:

88-00040/

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FOREWORD

In the course of undertaking their responsibilities, the Provincial Advisory Committee for the trade of Motor Vehicle Mechanic earlier recommended that the Ministry of Skills Development determine the proportion of Certificate of Qualification holders currently engaged in the actual or "hands on" practice of their trade. Underlying the Committee's recommendation is a concern that many Certificate of Qualification holders work in positions or occupations removed from the service and repair of motor vehicles and are unavailable to meet demands for mechanic services. In the absence of information on this aspect, it is very difficult to assess the actual supply of motor vehicle mechanics in the Ontario economy.

In response to the Committee's request for employment-related information on persons in Ontario who hold a valid Certificate of Qualification in the trade of motor vehicle mechanic, the Ontario Manpower Commission in co-operation with the Apprenticeship Branch of the Ministry conducted a survey of certificate holders. At this time the Commission wishes to thank those certificate holders who participated in making the survey a success and is grateful for the time they invested to complete the questionnaire.

Finally, it is hoped that the information contained in this report will contribute meaningfully to the work of the Provincial Advisory Committee, and will be of interest to others.

Ontario Manpower Commission
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INTRODUCTION

The Provincial Advisory Committee for the trade of Motor Vehicle Mechanic has raised serious concerns over the lack of information on the number of qualified mechanics actually working in the service and repair of motor vehicles. In the Committee's view a simple count of Certificate of Qualification holders overstates the supply of tradesmen either working as general mechanics or working in the service and repair sector. It was suggested that many take employment in other sectors while others move into positions as service managers or front office personnel, or become company owners and no longer actively practice their trade.[1]

In light of these concerns, the Committee recommended that the Ministry of Skills Development determine the number of Certificate of Qualification holders currently practicing in the trade.

In response to this recommendation, the Apprenticeship Branch of the Ministry requested that the Ontario Manpower Commission undertake a survey which would address the concerns expressed by the Provincial Advisory Committee.

After consultations with Apprenticeship Branch personnel, a project was designed with the following objectives:

- o determine the labour force status of certificate holders, that is, derive estimates of the numbers of employed and unemployed and those who have withdrawn from the work force but still maintain their Certificates of Qualification;

- o determine the distribution of certificate holders by industry sector, and by occupation;

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1 Provincial Advisory Committee, Motor Vehicle Mechanic Trade, Meeting No. 1: Minutes, August 29, 1985.

- o obtain an understanding of the pattern of inter-industry and inter-occupational mobility of certificate holders in the motor vehicle mechanic trade.

The survey itself was conducted during the second quarter (April - June) of 1986[2]. Consequently, the findings reported represent a snapshot of motor vehicle mechanic certificate holders during that reference period. Questionnaires were mailed to a sample of 7,500 certificate holders.[3] The sample was representative of the age and regional distribution of both the greater certificate holder population and the Ontario population generally. Sample size was designed to take into account an estimated response rate of 50.0 percent. Accepted for analysis were 4,187 returns which constitutes a response rate of 55.8 percent. [4]

Subsequent sections of this report provide a review of the labour force characteristics of certificate holders and their occupational and industrial distribution, as well as the extent to which the (manual) skills of the trade are practiced by certificate holders. Also featured are findings related to job tenure (that is, an analysis of length of time with current employer or length of time self-employed) by selected characteristics. Emerging from this discussion of job tenure are insights on mobility patterns and their implications.

Before turning to these subsequent sections, a summary of the main findings is presented.

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2 A copy of the survey questionnaire is appended in Appendix I.

3 The Gallup Poll Company Limited was contracted to perform the data collection stages of the survey. The greater part of the study (including the survey design, development of the questionnaire, cross-tabulation and analysis of the data, and the preparation of the report) was undertaken by the Ontario Manpower Commission.

4 Information on the characteristics of the survey population is presented in Appendix II. The sample was drawn randomly from the certificate holder population as of December 1985. A 95.0 percent level of confidence was applied based on an anticipated response rate of 50.0 percent.

HIGHLIGHTS

- It is estimated that 83.7 percent of certificate holders are in the work force. Consequently, a simple count of certificate holders in this trade over-represents the number of motor vehicle mechanics available for work. Fully 16.3 percent of persons registered with the Ministry have withdrawn from the labour force — primarily into retirement. Sharp declines in the participation rates of certificate holders aged 45-54 together with responses from those no longer in the labour force provide strong evidence that this group begins to withdraw from the labour force into retirement sooner than other males.

- Of those in the workforce, estimates place the actual number of certificate holders performing general mechanics duties, either as their primary or secondary job function, at 22,910 — fewer than one-half (43.7 percent) of the 52,465 Certificate of Qualification holders registered with the Ministry of Skills Development as of December, 1985.

- As age increases the proportion of paid workers who work as general mechanics decreases. Typically, certificate holders move into supervisory jobs as their principal occupation or self-employment where their primary job function is business operation. As a result: fewer certificate holders are available to work as general mechanics in the service and repair of motor vehicles; and fewer are available, as paid workers, to employers.

- The labour market for certificate holders is very favourable. Overall, their unemployment rate is low (2.3 percent), a strong indication that the unemployment they experience is primarily frictional in nature. Further, for younger certificate holders (20-29 years old) the unemployment rate is close to 1 percent and for groups between the ages of 45 and 64 the proportion unemployed is 3 percent or lower.

- Faced with the need to replace workers moving into other jobs, employers must either recruit or train. Recruitment is made difficult by the very low unemployment rate (2.3 percent) experienced by certificate holders. With respect to training, the apprenticeship period for this trade is long (5 years). The duration of the apprenticeship period together with frequent mobility among mature tradesmen (i.e. those delivering on-site training), and the costs incurred by the loss of skilled tradesmen may constrict the ability of employers to undertake training.

- Finally, as the age of certificate holders increases, mobility away from Automotive Service and Repair to other industry sectors is observed.

LABOUR FORCE PROFILE

The Labour Force

Analysis of survey results discloses that 83.7 percent of certificate holders currently participate in the labour force. The balance, 16.3 percent, have withdrawn from the labour force (see Table I). Consequently, **a simple count of certificate holders over-represents the number of motor vehicle mechanics actually in the work force.** As of December 1985, 52,465 persons held certificates in the trade of motor vehicle mechanic. Using the estimate of 16.3 percent for withdrawal from the labour force, the count of 52,465 would be reduced by 8,552 leaving a workforce of 43,913.

For those certificate holders who are in the labour force, a large majority (97.7 percent) are employed. The low incidence of unemployment among certificate holders (2.3 percent)[5], reflects a highly competitive market for employers who are attempting to recruit qualified motor vehicle mechanics. Further, for younger workers the unemployment rate is below 2 percent and for those between the ages of 45 and 64 the proportion unemployed is 3 percent or lower.

As one would expect, the proportion of certificate holders in the labour force is highest for younger persons (96.8 percent for 20-29 year olds) and declines as age increases. (Conversely, as shown in Table 1, the proportion of certificate holders not in the labour force increases with age.)

Overall, the level of labour force participation displayed by certificate holders parallels that exhibited generally by Ontario males.[6] There are, however, some notable differences in the labour force behaviour of

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5 Or 1,010 persons.

6 The vast majority of certificate holders are male making it appropriate to compare their labour force participation rate to that of Ontario males ages 20 and over.

TABLE 1

LABOUR MARKET STATUS, CERTIFICATE HOLDERS[1] AND ONTARIO MALES,[2] SECOND QUARTER, 1986

AGE	PARTICIPATION RATE[3] %		UNEMPLOYMENT RATE[4] %		NON-PARTICIPANTS %	
	C of Q Holders	Ontario Males	C of Q Holders	Ontario Males	C of Q Holders	Ontario Males
All Ages (20 plus)	83.7	81.6	2.3	5.9	16.3	18.4
20-29	96.8	93.1*	1.2	9.3*	3.1	6.9*
30-44	87.9	96.8*	1.9	4.7*	12.1	3.2*
45-54	77.9	93.8	3.0	3.4	22.1	6.2
55-64	75.1	74.1	2.6	5.6	24.9	25.9

1 Survey Respondents (Certificate of Qualification Holders).

2 Source: Statistics Canada, The Labour Force, Cat. No. 71-001. Averages for the second quarter 1986 were calculated by the Ontario Manpower Commission. *Special Tabulation, Household Survey Division, Ottawa.

3 Labour Force as a percentage of the Population.

4 Unemployment as a percentage of the Labour Force.

certificate holders aged 45 and over. Certificate holders aged 45-54 exhibit a significantly lower labour force participation rate compared to their cohorts (77.9 compared to 93.8 percent) while for those aged 55-64 participation rates are comparable (75.1 compared to 74.1 percent).

On the basis of the preceeding comparison, it appears that certificate holders begin to withdraw from the labour force at ages younger than other males.[7] Among those 45-54, over 20 percent of certificate holders have withdrawn from the labour force compared to approximately 5 percent of similar-age males in Ontario. This lower level of labour force participation among mature certificate holders is attributable primarily to early retirement. Among certificate holders who were not employed and not looking for work, 66.8 percent reported that they were retired. Of these, 57.4 percent are aged 54 and under.

Of certificate holders registered with the Ministry, ten percent are aged 65 and older. It is notable that a significant proportion (three-quarters) of persons in this age group remain active in the labour force. However, the reader should keep in mind that, in order to obtain an exact account of the labour force behaviour of these older certificate holders, it would be necessary to sample individuals (over age 65) who have permitted their certificates to lapse and are no longer registered with the Ministry.

Basis of Employment

Most certificate holders are employed on a full-time basis. Few (2.5 percent) are employed on a part-time basis only. The incidence of part-time employment among certificate holders is much lower than the average of 4.0 percent for males, aged 20 and over, in Ontario. Part-time employment increases with age from 1.4 percent of certificate holders aged 20-29 to 5.7 percent of those aged 55-64. In keeping with this pattern, 47.7 percent of persons working on a part-time basis reported that they are semi-retired (see Table 2).

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7 The extent to which such certificate holders may re-enter the labour market at a future date is not known.

TABLE 2

PART-TIME EMPLOYMENT AND REASON FOR PART-TIME EMPLOYMENT[1], SECOND QUARTER, 1986, ONTARIO

	PART-TIME EMPLOYMENT[2] %	REASON FOR PART-TIME EMPLOYMENT				
		ATTENDING SCHOOL %	NO FULL-TIME WORK AVAILABLE %	SEMI RETIREMENT %	OTHER/ NOT STATED %	TOTAL[3] %
All Ages	2.5	9.3	11.6	47.7	27.9	100.0
20-29	1.4	25.0	-	12.5	62.5	100.0
30-44	1.4	10.0	15.0	35.0	40.0	100.0
45-54	3.2	9.1	9.1	63.6	13.6	100.0
55-64	5.7	6.9	10.3	58.6	17.2	100.0
Ontario Males 20+ Years[4]	4.0	-	-	-	-	-

1 3.2% of employed certificate holders did not indicate whether their work was full or part-time.

2 Number of persons employed part-time as percentage of Labour Force.

3 Due to rounding, percentages may not always total 100.0%.

4 Source: Statistics Canada, The Labour Force, Cat. No. 71-001. Average for the second quarter 1986 calculated by the Ontario Manpower Commission.

TABLE 3

NATURE OF EMPLOYMENT, SECOND QUARTER, 1986, ONTARIO

AGE	SELF-EMPLOYED %	PAID WORKERS %	NOT STATED %	TOTAL[1] %
Ontario Males 20+ Years[2]	9.7	90.3	—	100.0
Certificate Holders				
All Ages	21.0	78.0	1.1	100.0
20-29	10.6	88.6	.7	100.0
30-44	20.4	78.7	.9	100.0
45-54	23.7	75.0	1.3	100.0
55-64	26.2	72.6	1.2	100.0

1 Due to rounding, percentages may not always total 100.0%.

2 Source: Statistics Canada, The Labour Force, Cat. No. 71-001. Average for the second quarter, 1986 calculated by The Ontario Manpower Commission.

Self-employment is more prevalent among certificate holders than is generally the case. As indicated in Table 3, over one-fifth of employed certificate holders are self-employed, which is in marked contrast to 9.7 percent for all employed males in Ontario. The proportion of self-employed certified holders increases with age. While 10.6 percent of those 20-29 years of age are self-employed, this proportion increases to 20.4 percent for those 30-44[8] and continues to increase to 26.2 percent among certificate holders 55-64 (see Table 3).

Briefly recalling the earlier discussion of labour force behaviour, it was noted that older certificate holders demonstrate higher than average labour force participation rates. This may be due, in part, to the high incidence of self-employment among certificate holders in the older age groups as self-employment extends labour force participation.[9]

Summary Discussion

A simple count of certificate holders has been shown to over-represent the number of motor vehicle mechanics available for work. The finding that 16.3 percent of persons registered with the Ministry have withdrawn from the labour force can be used to estimate the number of motor vehicle mechanics in the workforce at 43,913 as of December, 1985.

Certificate holders enjoy strong market demand for their skills as evidenced by the low unemployment rate they experience. Strong market demand is also likely to provide a favourable environment for self-employment and may be a factor in the higher incidence of self-employment reported among certificate holders than is typically the case among other males.

Sharp declines in the participation rates of certificate holders aged 45-54, coupled with responses of non-participants, indicate that certificate holders begin to withdraw and retire from the labour force sooner than other males.

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8 Interestingly, 60.9 percent of those presently 30-35 years of age report making the transition into self-employment prior to becoming 30 years old.

9 The self-employed are not subject to institutional retraints such as company personnel policies or provisions of group pension plans which might require retirement at age 65.

EMPLOYMENT BY OCCUPATION AND INDUSTRY

This section provides an examination of the industrial and occupational distribution of employed certificate holders. As well, from an assessment of primary and secondary job tasks the proportion of certificate holders currently engaged in the active practice of their trade is estimated.

Occupation

An examination of the occupational distribution of certificate holders confirms that many licensed motor vehicle mechanics do not actively practice their trade. As is evident from Table 4, only 41.3 percent of all employed certificate holders are general mechanics[10] and thus are directly and primarily engaged in the service and repair of motor vehicles. Others are working in related fields such as industrial mechanic (8.9 percent), fleet mechanic (2.6 percent) and diesel mechanic (1.1 percent). However, the second and third largest occupational groups, after general mechanic, are those composed of supervisors (16.1 percent), and owners (15.1 percent).

Secondary Occupational Characteristics

While less than one-half (41.3 percent) of certificate holders work as general mechanics directly engaged in the service and repair of motor vehicles, a significant proportion of certificate holders in other occupations report that they perform such duties regularly on a secondary basis, as part of their job.

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10 Mechanics categories are based on Canadian Classification and Dictionary of Occupations designations (job titles/tasks). All categories grouped under general mechanic require certification as a motor vehicle mechanic. The occupation of general mechanic includes: motor-vehicle mechanic, engine repairman; transmission mechanic; tune-up man; repairman; front-end man; automotive-brake repairman; muffler installer; automotive-air-conditioning; spring serviceman; automotive-radiator repairman; automotive wrecker; used-car renovator; squeak, rattle and leak man; automobile-accessories installer; mechanical-unit repairman; trolley coach mechanic (includes buses).

TABLE 4

CERTIFICATE HOLDERS[1] BY OCCUPATION, SECOND QUARTER, 1986, ONTARIO

Occupation	Percent
TOTAL 100.0	
All Mechanics	55.0
General Mechanic	41.3
Industrial Mechanic	8.9
Fleet Mechanic	2.6
Diesel Mechanic	1.1
Farm Machinery Mechanic	0.4
Airline Mechanic	0.3
Propane Conversion Mechanic	0.2
Recreational Vehicle Mechanic	0.1
Marine Mechanic	0.1
All Supervisors, Managers, Owners[2]	31.7
Supervisor	16.1
Owner 15.1	
Chief Executive Officer	0.5
All Administrative/Professional	4.9
Teaching	2.8
Enforcement/Inspection	1.1
Administration	1.0
All Customer Relations, and Service	2.8
Sales 1.5	
Job Estimator	0.6
New Car Service	0.2
Technical Service	0.2
Body Repair	0.2
Customer Relations	0.05
Gas Pump Attendant	0.02
All Other Occupations	5.0
Not Stated	0.6

1 Employed certificate holders only.

2 Not all self-employed certificate holders list 'owner' as their occupation. The response to this question may be related to company size. For instance, a self-employed certificate holder operating a one-man repair shop may spend most of his time in the service and repair of motor vehicles and thus describe his occupation as general mechanic. On the other hand, someone owning a larger shop that employs other mechanics, may allocate more time to administration and management, and consequently report his occupation as owner. This view is borne out by the fact that 64.9% of owners reported performing duties of a general mechanic on a secondary basis, as part of their job.

Overall, 31.3 percent of certificate holders in occupations other than that of general mechanic report performing some general mechanic duties on a regular basis.[11]

Industry and Occupation

Fully one-half of employed certificate holders work in the Automotive Service and Repair sector. Other sectors employing a significant share of qualified motor vehicle mechanics are: Manufacturing (11.4 percent); Storage and Transportation Industries (10.1 percent); Government (7.3 percent); Service Industries (4.9 percent); and Primary Industries (3.4 percent) (see Table 5).

The distribution of certificate holders by industry and occupation is presented in Table 6. Of certificate holders employed as general mechanics, 62.6 percent work in the Automotive Service and Repair sector. Additionally, 35.0 percent of certificate holders engaged in the service and repair of motor vehicles on a secondary basis, work in this sector.

Continuing in close parallel to patterns of industrial distribution, other sectors employing a significant share of general mechanics are: Manufacturing (7.9 percent); Storage and Transportation Industries (9.4 percent); and Government (6.9 percent).[12]

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11 In particular, 24.2 percent of supervisors, and 64.9 percent of owners report performing such job tasks.

12 As a point of comparison, 13.0 percent of all employed certificate holders work in automobile dealerships (a sub-sector of Automotive Service and Repair) — a share greater than that found in every other major industry sector.

TABLE 5

CERTIFICATE HOLDERS[1] BY INDUSTRY, SECOND QUARTER, 1986, ONTARIO

Industry	Percent
All Industry	100.0
Automotive Service and Repair	49.9
Manufacturing	11.4
Storage and Transportation	10.1
Government	7.3
Service[2]	4.9
Primary 3.4	
Retail 2.3	
Communications	2.2
Construction	2.2
Wholesale[3]	1.6
Agriculture[4]	1.3
Wholesale - Distribution[5]	0.1
Other[6] 1.6	
Not Stated	1.5

1 Employed certificate holders only.

2 Includes Education, Hospital, and Social Services; Food and Beverage and Hotel/Motel Accommodation Services; Finance, Insurance, and Real Estate Services; Business Services; and Other services.

3 Includes Wholesale Suppliers of Parts and Accessories for Automobiles, Trucks and Buses, Trailers, and other Products/Industries, Wholesale.

4 Includes Farm Machinery Retail and Service, Equipment Manufacturing, Repairs (as primary activity); and Farming or Farm Operator.

5 Distributors of European cars and parts to automobile dealerships.

6 Includes respondents who checked more than one industry category.

TABLE 6

OCCUPATION BY INDUSTRY, SECOND QUARTER, 1986, ONTARIO

INDUSTRY SECTORS

OCCUPATION	Automotive Service & Repair %	Manufac-turing %	Storage & Transport-ation %	Govern-ment %	Service %	Primary %	All[1] Others %	Not Stated %	Total %
All Occupations	49.9	11.4	10.1	7.4	3.4	4.9	11.5	1.0	100.0
Mechanics[2]	50.9	12.6	12.0	7.6	1.2	4.3	10.3	1.5	100.0
General Mechanic	62.6	7.9	9.4	6.9	1.3	3.0	7.8	1.1	100.0
Other Mechanics	15.4	26.9	19.9	9.8	1.1	8.1	17.9	0.9	100.0
Supervisory/Management/ Owners	61.9	8.0	7.5	5.2	2.3	2.8	11.5	0.9	100.0
Administration/ Enforcement & Inspection, Teaching	15.4	10.7	4.1	14.2	49.1	0	3.6	3.0	100.0
Customer Relations & Service[3]	40.2	9.3	5.2	0	8.2	0	33.0	4.1	100.0
Other	1.7	23.3	13.4	[illegible]	16.9	3.5	20.9	5.8	100.0

1 This category includes Retail, Communications, Construction, Agriculture, and the Wholesale-Distribution sectors, as well as respondents who checked more than one industry category.

2 This category includes general mechanic, industrial mechanic, recreational vehicle mechanic, marine mechanic, airline mechanic, farm machinery mechanic, fleet mechanic, propane conversion mechanic.

3 This category includes job estimator, salesman, pumping and serving gas, customer relations, new car service, technical service to dealer, body repair.

Summary Discussion

From the preceeding review, two key points emerge.

First, more than one-half of all certificate holders in the workforce do not practice their trade as their primary activity in their current job. Second, and equally important, is the finding that many certificate holders employed in an occupation other than that of general mechanic service and repair motor vehicles regularly on a secondary basis, as part of their job.[13] These findings place the actual number of certificate holders performing general mechanic duties at 22,910,[14] a figure substantially lower than the 52,465 certificate of qualification holders registered with the Ministry as of December, 1985.[15]

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13 31.3 percent of those employed in other occupations, service and repair motor vehicles. Further, of those reporting three principal job functions, 18.0 percent described their tertiary duties as those of general mechanic. Overall, 37.0 percent of employed certificate holders described job functions attributable to two occupational categories while 11.0 percent reported performing job functions related to three distinct occupational categories.

14 While representing 43.7 percent of certificate holders registered with the Ministry, this figure constitutes 53.4 percent of all employed certificate holders.

15 Fully one-half of employed certificate holders work in the Automotive Service and Repair sector. Of these, 69.0 percent perform the duties of a general mechanic on a primary or secondary basis as part of their job. This means that the number of practicing motor vehicle mechanics situated in the Automotive Service and Repair sector is 14,802.

TENURE[16]

Discussed in this section are findings related to job tenure. Also reviewed are data on the distribution of employed certificate holders, by age, across occupations and industry sectors. The latter provides some insight into both the inter-occupational mobility patterns of certificate holders and movement between industry sectors. In this context, self-employed and paid-workers are distinguished in order to determine likely differences between the groups.

Finally, implications of the findings for the Automotive Service and Repair sector are assessed in light of this sector's role in the provision of apprenticeship training.

Tenure

In comparison with other males in the Ontario labour force, certificate holders, are more likely to report longer term tenures. Overall, 59.4 percent of certificate holders have worked in their current place of employment for six or more years as have 55.1 percent of the larger male labour force. Another 39.0 percent of certificate holders, and 44.9 percent of males generally, changed places of employment during the previous five years. However, underlying these broad aggregate statistics, certificate holders demonstrate substantial variation in length of job tenure by age, basis of employment (i.e. self-employed or paid worker), company size and industry sector.

While tenure is shown to increase with age, a look at tenure within individual age categories discloses that older certificate holders are frequently mobile. Forty percent of certificate holders aged 30-44 reported a change in employment locale within the last 5 years. Of those 45-54, 30.7 percent changed locales within this period as did 27.9 percent of workers 55-64 years. When compared to similarly aged males in the Ontario labour force,

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16 Tenure is defined as duration of employment with an individual's present employer, or duration of self-employment (as applicable).

certificate holders age 30 and older are more mobile than is typically the case.[17] **This trend is even more noticeable among certificate holders employed as paid workers** (see Tables 7 and 8).

Recalling the previous discussion of participation rates, it should be kept in mind that the effect of sharply declining labour force participation among certificate holders aged 45-54 and 55-64, would be to emphasize the incidence of shorter term tenure within these age groups. In any event, both phenomena hold consequences for employers. Employers are faced with employee loss and its attendant costs, both as a result of early labour force withdrawal, and as a result of higher than usual turn-over among mature workers.

Company size also appears to be correlated with length of tenure. **Certificate holders working in larger companies report longer tenures than those working in small and medium size companies.** For example, roughly one-half (48.6 percent) of certificate holders employed in companies of more than 100 employees have worked at that place of employment more than ten years. However, only one-quarter (24.2 percent) of certificate holders working in companies of 25 or fewer persons report having tenure of more than ten years.

This finding is in keeping with the view that larger establishments are typically able to offer better wages, benefit packages and working conditions and are thus more attractive to paid workers.

Longer term tenures are exhibited by certificate holders within **industry sectors** typified by larger company sizes such as Manufacturing. **Comparatively shorter-term tenures are experienced by certificate holders within Automotive Service and Repair.** In the Manufacturing sector where 69.9 percent of employee certificate holders work in companies of more than 100 employees, 38.4 percent of all paid employees report tenures of more

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17 Among males 20-29 years, certificate holders working as paid employees are less mobile than other males (25.0 percent vs. 40.6 percent respectively).

TABLE 7

LENGTH OF JOB TENURE BY AGE: CERTIFICATE HOLDERS, AND ONTARIO MALES,[1] SECOND QUARTER, 1986, ONTARIO

Age	LENGTH OF TENURE													
	Less than 1 Year		1-5 Years[2]		6-10 Years		11-15 Years		16-24 Years		More than 25 Years		Not Specified	
	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %	Ontario Males %	C of Q Holders %
All Ages	20.6	13.0	24.3	26.0	19.2	22.4	13.4	15.6	13.4	13.4	9.1	8.0	-	1.6
20-29	40.6	24.5	39.7	39.8	17.7	27.2	2.6	6.4	-	-	-	-	-	2.2
30-44	14.5	12.5	22.4	27.7	25.2	23.8	21.1	18.4	15.5	11.8	1.2	4.2	-	1.5
45-54	10.8	9.2	14.4	21.5	14.7	19.7	14.7	17.9	24.5	16.3	21.0	11.4	-	2.1
55-64	9.0	9.3	11.4	18.6	11.0	17.5	12.7	15.5	21.4	19.0	34.1	18.6	-	1.7

1 Includes the self-employed and those working for others.

2 13-60 months inclusive.

3 Longer-term tenures among the young may be as a result of apprenticeships undertaken with the present employer.

TABLE 8

LENGTH OF JOB TENURE BY AGE: CERTIFICATE HOLDERS WHO ARE PAID WORKERS, SECOND QUARTER, 1986, ONTARIO

Age	Less than 1 Year %	1-5 Years[1] %	6-10 Years %	11-15 Years %	16-24 Years %	More than 25 Years %	Not Specified %	Total %
All Ages	14.3	27.2	22.3	15.6	12.9	6.4	1.4	100.0
20-29	25.0[2]	38.6	28.1	6.7	-	-	1.2	100.0
30-44	13.7	29.0	23.1	18.6	11.3	3.3	1.1	100.0
45-54	10.5	22.7	18.4	18.4	18.4	9.1	2.6	100.0
55-64	10.1	19.6	18.2	15.4	20.5	14.9	1.4	100.0

[1] 13-60 months inclusive

[2] Longer-term tenures among the young may be a result of apprenticeships undertaken with the present employer.

than ten years.[18,19] In comparison, within the Automotive Service and Repair sector where 61.0 percent of paid employees work in establishments of 25 or fewer persons, 25.8 percent report tenures of more than ten years duration (See Table 9).

Occupation and Age/Inter-occupational Mobility

As stated previously, analysis of the distribution of certificate holders by occupation and age has been undertaken to provide insight into patterns of inter-occupational mobility likely experienced by this group.

Certificate holders employed as general mechanics, engaged in the service and repair of motor vehicles, on the whole, tend to be younger than certificate holders working in other occupations. (A small proportion, 17.5 percent, of general mechanics are 45 years of age or older.) Further, whereas 80.9 percent of paid workers 20-29 years are employed as "hands-on" mechanics, this figure decreases steadily to: 67.7 percent of those aged 30-44 years, 58.9 percent of those aged 45-54 years, and 56.8 percent of those aged 55-64 years.[20,21]

Consistent with this trend, the proportion of certificate holders employed as **paid workers** in other occupations, that is, not as mechanics, increases dramatically with age.

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18 Likewise, both the Government and the Storage and Transportation sectors exhibit a small but steady increase in the proportion of certificate holders they employ as tenure increases.

19 The frequency of exits from, or re-entries into, a particular sector cannot be assessed on the basis of data regarding tenure.

20 "Hands-on" mechanics occupations include general mechanic and all other mechanic categories including new-car serviceman (see Table 4).

21 Among the self-employed the proportion of certificate holders engaged as hands-on mechanics is relatively constant, regardless of age: 17.0 percent of those aged 20-29 years are in such occupations, as are 16.8 percent of those aged 30-44 years; 13.8 percent of those aged 45-54 years; and 15.6 percent of those aged 55-64 years.

TABLE 9

JOB TENURE, KEY INDUSTRY SECTORS BY NATURE OF EMPLOYMENT, SECOND QUARTER, 1986, ONTARIO

INDUSTRY	Automotive Service and Repair				Manufacturing			
TENURE (Years)	Certificate Holders %	Paid Workers %		Self-Employed %	Certificate Holders %	Paid Workers %		Self-Employed %
1	15.9	19.6	50.1	8.3	11.0	11.5	38.5	7.7
1-5	27.2	30.5	73.1	20.3	25.8	27.0	61.0	19.3
6-10	23.2	23.0		23.6	21.7	22.5		11.5
11-15	14.4	13.1		17.1	11.5	11.2		11.5
16-24	10.3	7.7	25.8	15.5	21.0	20.2	38.4	26.9
25+	8.0	5.0		14.2	8.2	7.0		23.1
Not Stated	1.1	1.0		1.1	0.8	0.6		--
TOTAL	100.0	100.0		100.0	100.0	100.0		100.0

These findings support the view that **movement into other occupations by certificate holders initially employed as general mechanics increases significantly with age.** In all likelihood, many transfer into self-employment or move into supervisory jobs (as evidenced by the positive correlation between these occupations and age). Early retirement (i.e. voluntary labour force withdrawal) as discussed in the first section of this report may also play a role with respect to occupational mix within age categories. **The consequence of such movement is that fewer certificate holders are available to employers to work as mechanics in the service and repair of motor vehicles.**

Industry and Age/Industry Sector Transfers

Briefly recalling the discussion of tenure, the greater predominance of shorter-term tenures among paid employees in the **Automotive Service and Repair** sector suggests that **certificate holders working in this sector are more mobile than those working elsewhere.** More interesting however is the extent of exits from Automotive Service and Repair to other sectors as suggested by findings pertaining simply to industry and age.

A detailed look at industry distributions within age categories reveals that 62.6% of certificate holders aged 20-29 and working in the employ of others, are located in the Automotive Service and Repair sector. Although Automotive Service and Repair remains a significant employer, **the share of certificate holders claimed by this sector declines significantly and consistently with increasing age.** (Of paid workers age 30-44, 43.4 percent are located in Automotive Service and Repair; among those 45-54, this figure falls to 37.8 percent; and among those 55-64, the figure declines further to 34.1 percent.) Correspondingly, the share of paid workers claimed, for example, by Manufacturing, increases steadily to age 64—indicating significant movement into other industry sectors from Automotive Service and Repair, by certificate holders, both shortly after certification and throughout their careers (see Table 10).

TABLE 10

CERTIFICATE HOLDERS BY AGE AND MAJOR INDUSTRY SECTOR,
SECOND QUARTER, 1986, ONTARIO

	AGE											
	20-29			30-44			45-54			55-64		
INDUSTRY	C of Q %	Paid Workers %	Self-Employed %	C of Q %	Paid Workers %	Self-Employed %	C of Q %	Paid Workers %	Self-Employed %	C of Q %	Paid Workers %	Self-Employed %
Automotive Service & Repair	64.7	62.6	83.1	50.4	43.4	78.3	45.5	37.8	71.3	43.8	34.1	72.1
Manufacturing	6.7	7.5	0.0	10.8	13.1	2.1	13.8	16.2	5.0	14.2	16.9	7.0
Storage and Transportation	10.1	11.0	3.4	10.1	11.7	3.9	8.9	9.9	5.0	11.2	13.1	4.7
Government	2.9	3.3	0.0	7.5	9.1	1.4	8.2	10.7	0.6	9.9	12.6	1.6
Primary Industry	2.0	1.8	3.4	4.2	4.6	2.1	3.6	4.4	1.3	3.2	4.2	0.8
Service	2.2	2.4	0.0	4.0	4.7	2.1	6.4	7.5	3.1	6.1	7.3	3.1
Other	9.9	9.6	10.1	11.1	12.0	8.0	12.7	13.1	11.2	9.3	10.4	7.6
Not Stated	1.6	1.6	0.0	1.7	1.5	2.1	1.0	0.4	2.5	2.0	1.4	3.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Support for this view emerges from an analysis of tenure by age among certificate holders who are paid employees in the Manufacturing and Automotive Service and Repair sectors. While longer term tenures (11 years or more) are more frequently experienced in every age category by those in the Manufacturing sector, there are certain inconsistencies in the establishment of this pattern. For example, the proportion of certificate holders 30-44, employed in Manufacturing for 1-5 years is greater than for Automotive Service and Repair (34.3 percent vs. 30.1 percent). This finding, when considered in tandem with observations on industry distributions within age categories, is indicative of mid-career transfers into the Manufacturing sector from other sectors, primarily Automotive Service and Repair.

Summary Discussion

Certificate holders aged 30 and older are more mobile than is generally the case. This, coupled with sharp declines in labour force participation among certificate holders 45-54 and 55-64, indicates that employers experience high turn-over of persons they recruit as qualified motor vehicle mechanics. Heightening the difficulties employers face in this regard is the low unemployment rate experienced by certificate holders.[22]

Also, as age increases, the proportion of paid workers working as general mechanics decreases. The evidence indicates that certificate holders typically move out of the general mechanic occupation into self-employment or supervisory jobs. Implications associated with such movement are that: fewer certificate holders are available to employers as paid workers; and fewer are available to work in the service and repair of motor vehicles.

Employers faced with the need to maintain their capacity must either recruit or train for general mechanic positions. As mentioned above, recruitment in a tight labour market is difficult. Further, the apprenticeship period for this trade is long (5 years). In addition to the length of the

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22 The low level of unemployment enjoyed by certificate holders may be expected to facilitate their mobility and make recruitment more competitive.

apprenticeship period, the training option may be complicated by two other factors. First, the training cycle may be interrupted by the loss of skilled tradesmen available to perform training (either to other employers, self-employment,[23] or another occupation). Second, in face of the costs incurred by the loss of a skilled tradesman and the urgency of locating a replacement, employers encountering frequent turn-over may find it difficult to participate in an apprenticeship training program.

Finally, regarding industry sector transfers, industrial mobility is positively correlated with increasing age. The distribution of certificate holders across industries and individual age categories points to significant movement out of Automotive Service and Repair into other sectors (chiefly Manufacturing, Government, Transportation and Storage Industries, Primary Industries, and Service Industries).[24]

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23 The newly self-employed would also contribute to the demand for certificate holders to work in their establishments.

24 It should be noted that the project did not address: questions of supply in the context of demand; the effects of market factors such as wages and benefits (contributing to the present patterns of employment); and exact longitudinal mobility patterns.

APPENDIX I

Ontario

Ministry of
Skills
Development

Ninth Floor
Mowat Block
Queen's Park
900 Bay Street
Toronto, Ontario
M7A 1L2

Telephone: 963-3114

March 26, 1986

Dear Recipient:

As you may know the Ministry of Skills Development is now responsible for apprenticeship training programs and tradesmen's qualifications in the Province of Ontario.

In this regard, we are conducting a survey of qualified Motor Vehicle Mechanics in order to obtain information on the areas and industry sectors in which they work. As part of the group being surveyed, please take a few moments to complete the questionnaire and return it in the stamped return envelope provided. Your answers will assist us in planning for the future, and strengthening the apprenticeship training program for your trade.

Your co-operation is greatly appreciated.

Yours truly,

J. Lanthier
Director of Apprenticeship

Encl.

QUESTIONNAIRE

1. **Are you currently employed?**

   Yes ☐ No ☐ (IF NO PLEASE TURN TO BACK PAGE) *14*

PLEASE ANSWER QUESTIONS 2-10 ONLY IF CURRENTLY WORKING

NOTE: If you hold more than one job, please refer to your main job only when answering the following questions.

2. **Are you self employed (i.e. own and operate your own business)?**

   Yes ☐ No ☐ *15*

3. **Is your work:**

   Full-Time (Usually more than 30 hrs/wk) ☐ (IF FULL-TIME PLEASE GO TO 5)
   Part-Time ONLY (Usually less than 30 hrs/wk) ☐ (IF PART-TIME ONLY PLEASE GO TO 4)

4. **If you work Part-time ONLY, please indicate the reason:**

   Attending School/Courses ☐ *17*
   Semi-Retired ☐ *18*
   No Full-Time Jobs Available ☐ *19*
   Other ☐ *20-21* Please Specify: _____

5. **Please estimate the number of persons employed in the firm in which you work OR own:**

   1-10 ☐ 26-50 ☐ 101-250 ☐
   11-25 ☐ 51-100 ☐ Over 250 ☐ *22*

6. **How long have you worked for your present employer, OR if Self-Employed on a Full-Time basis, how long you have been self-employed?**

   _____ *23-2*

7. **Please state your present Job Title:**

   _____ *27-3*

8. **Please describe the main duties and activities you perform regularly in your work:**

   _____

9. **Please check the category below which describes most closely the industry sector in which your Firm or Employer operates.**

PRIMARY INDUSTRIES

- ☐ Logging, Forestry Industries
- ☐ Mining, Milling, Quarrying Industries
- ☐ Oil Well Industries

MANUFACTURING

- ☐ Food, Beverage, Tobacco Products
- ☐ Rubber, Plastic, Leather, Textile, Clothing Industries
- ☐ Wood, Furniture and Fixture, Paper and Allied Products, Printing and Publishing Industries
- ☐ Transportation Equipment Industries (Includes Aircraft and Parts; Trucks; Vehicles, Parts and Accessories; Railroad Rolling Stock; Shipbuilding, Boatbuilding, and Repair; and Other Transportation Equipment Industries)
- ☐ Primary Metal, Fabricated Metal, Machinery Industries
- ☐ Electrical and Electronic Products Industries.
- ☐ Non-Metallic Mineral Products (Ex. Glass, Cement, Clay); Refined Petroleum and Coal Products; Chemical and Chemical Products
- ☐ Other Manufacturing Industries. Please Specify: _____

STORAGE SERVICE AND TRANSPORTATION INDUSTRIES

- ☐ Air, Railway, Water, and Truck, and Related Service Industries
- ☐ Public Passenger Transit Systems Industries (Ex. Urban Transit, Inter-City Transit, School Bus, Charter and Sightseeing Bus Services)
- ☐ Other Transportation and Related Service Industries (Ex. Taxicab)
- ☐ Pipeline Transmission Industries
- ☐ Storage and Warehousing Industries

COMMUNICATION AND OTHER UTILITY INDUSTRIES

- ☐ Communication Industries (Includes Postal and Courier Services Telecommunication, Radio and T.V. Broadcasting Stations)
- ☐ Utility Industries (Includes Electrical Power, Gas, Water)

RETAIL TRADE INDUSTRIES

- ☐ Automotive Parts and Accessories Stores
- ☐ Other Retail Industries (Includes Food and Beverage Distribution, Apparel and Dry Goods, General Retail Merchandising, and Other Retail, and Non-Store Retail Industries)

WHOLESALE TRADE INDUSTRIES

- ☐ Wholesale Suppliers of Parts and Accessories for Automobiles, Trucks and Buses, Trailers.
- ☐ Other Products/Industries, Wholesale (Ex. Farm, Pertroleum, Food and Beverage, Household Goods, Apparel, Metals, Machinery and Other Products/Industries.

CONSTRUCTION INDUSTRIES

- ☐ Residential and Non Residential Building and Development (Includes Single Family Housing, Apartment, Commercial, Manufacturing and Institutional Buildings)
- ☐ Industrial and Heavy Engineering Construction Other than Buildings (Includes Power Plants, Pipelines, Highways, Streets, Bridges, Sewage Systems, Transmission Lines)

AUTOMOTIVE SERVICE AND REPAIR

- ☐ Automobile, Truck, and Camper Truck (e.g. Motor Homes) Dealers
- ☐ Recreational (e.g. Snowmobile) and Marine Vehicle Dealers
- ☐ Gasoline Service Stations
- ☐ Motor Vehicle Service and Repair Shops (Includes such enterprises as garages, muffler shops;)

SERVICE INDUSTRIES

- ☐ Education Services, Hospitals and Social Services
- ☐ Food and Beverage and Hotel/Motel and Other Accommodation Services
- ☐ Finance, Insurance, and Real Estate Services
- ☐ Business Services (Includes Computer, Advertising and Legal Services)
- ☐ Other Services (Includes Recreational, Household, Membership Organizations)

GOVERNMENT

- ☐ Federal (Including Armed Forces) and Provincial
- ☐ Municipal

OTHER

- ☐ Please Specify: _____

CD 2

PLEASE ANSWER QUESTIONS 10-14 ONLY IF NOT CURRENTLY EMPLOYED

10. Are you currently looking for work?

Yes ☐ No ☐ *14* (IF NO PLEASE GO TO 14 BELOW)

11. How long have you been looking for work?

Less than One Month ☐
1-3 Months ☐
3-6 Months ☐
6-12 Months ☐
Over One Year ☐ *15*

12. Please state your last Job Title:

_____

16-

13. Please describe the main duties and activities you performed regularly in your last job:

_____

_____

_____ (PLEASE GO TO END

20-

14. If NOT looking for work, please indicate the one main reason:

Attending School/Courses ☐
Semi-Retired ☐
No Full-Time Jobs Available ☐
Other ☐ Please Specify: _____

26-

END THANK YOU FOR PARTICIPATING IN THIS SURVEY

APPENDIX II

TECHNICAL REPORT ON SURVEY METHODOLOGY

1. Sample Selection

The data analysed in this report were collected through a mail sample of 7,500 motor vehicle mechanic (MVM) tradesmen in Ontario. The non-stratified province-wide sample was drawn from the population of 52,465 Certificate of Qualification holders registered with the Ministry of Skills Development. The sample frame was the MVM file (referred to as the Population File) maintained by the Apprenticeship Branch of the Ministry.

The population is composed of the following groups of MVM categories:

- 310 A Motor vehicle mechanic (basic) (49,115);
- 310 H Motor vehicle mechanic also capable of the service and repair of vehicles powered by diesel engines (3,012);
- MAP 40 Motor vehicle mechanics whose training was formatted in a non-traditional fashion (338).[1]

One of the major considerations in determining sample size concerns the level of error deemed tolerable or acceptable. Sampling tolerances are determined by the sample design. The estimates produced from this survey were calculated to be within 15.0% of the true value at a 95.0% level of confidence and based on an anticipated rate of non-response of 50.0%. (However, given the actual response rate of 55.8% the maximum error is + 12.8%.[2]) The random sample was generated by SAS, a statistical computer package.

As indicated above, a simple random sampling approach was used in selecting the sample. Frequencies of different population characteristics (age, economic region, trade category, proportion of out-of-province Certificate of Qualification holders, proportion of in-province Certificate of Qualification holders, year of issuance of in-province Certificate of Qualification, etc.) were subsequently generated for the population file and the sample file and compared to assess the representativeness and therefore the reliability of the sample. In all instances, the sample file was extremely representative of the population.

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1 Also referred to as 310 X or 310 Z.

2 Applied to an example, ± 12.8% produces a variance of 38,293 to 49,533 around the estimate of labour force participants (43,913) used in this report. While each estimate contained in this report is subject to a potential maximum variance of ± 12.8% (with a 95.0% certainty), the figures reported are those with the greatest probability of occurring and therefore present the best view of actual circumstances.

Because the population file contained valuable data on certificate holders (including age, regional distribution, and year and province of issuance of the Certificate of Qualification,) a unique identification number was assigned to each member in the sample to permit linkage of the survey and population files. In this way information on each member in the sample that was already in the population file could be accessed for the survey respondents and included in the analysis. This served to reduce the number of questions on the survey instrument and therefore the response burden on the sample group.

2. Survey Instrument

The survey data was collected by means of a questionnaire designed (by the Ontario Manpower Commission) to elicit occupational, industrial, and other employment related information. The questionnaire consisted of a total of 14 questions. Of these, 8 were directed at currently employed respondents, and 5 at those not currently employed (see Appendix I).

3. Data Collection

The Gallup Poll Company Limited was contracted to perform the data collection stages of the survey. Their responsibilities included:

- o assigning and matching the identification number on the questionnaire and the mail-out envelope;
- o conducting a mail-out and logging returns;
- o conducting a second (follow-up) mail-out to non-respondents and logging returns;
- o developing a coding system in consultation with the Ontario Manpower Commission;
- o editing and coding responses;
- o producing a data tape.

All subsequent cross-tabulations and analysis of the data as well as the preparation of the report were conducted in-house by the Ontario Manpower Commission.

4. Coding

Due to the open-ended nature of Questions 7,8,12 and 13, a code guide was developed for responses related to occupation. A total of twenty-five occupational codes were identified.

5. Survey Response

Questionnaires were mailed to a total sample of 7,500 certificate holders. A second (follow-up) mail-out was sent to non-respondents. In total, 4,187 responses (55.82% of the sample)[3] were accepted to be used in the analysis.

An analysis of non-respondents was conducted to determine whether they shared the same characteristics as the survey respondents. This analysis indicated that non-respondents were randomly distributed among the sample.

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3 This response rate is based on the original sample size of 7,500 MVMs who were mailed copies of the survey. If the size of the sample is reduced by the number of survey packages returned by the Post Office as Non-Deliverables (707) then the response increases to 61.6%.

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